GETTING STARTED WITH QUERY BUILDER AND HQEIS

1. **To get started in Query Builder:** **This is not for the novice user of HQEIS. The user needs to be familiar with the database structure and the business rules to construct and execute an accurate query.**

    a. Ask for a Query Builder password from the HQEIS team at hqeis@usace.army.mil. The Query Builder username/password is different from the HQEIS username/password so be sure you say you need a password for Query Builder.
    b. Click on the 'Query Builder' icon on the Main Menu.
    c. Type in your name (lower case), press TAB and type the password provided by the HQEIS team (lower case), press TAB and type gladiator_ora1 (this is an ora(one) not ora(letter L)) in the 'Connect' box. Then press the 'Connect' button.
    d. A 'Start Query Builder' box will then appear. The user has the option to select 'Create New Query' or 'Open Query from File System'. Select 'Create New Query' and press 'OK'. Use the 'Open Query from File System' to revise or rerun a query that was saved previously to the user's local drive (C:\\Client\C$). Queries are saved with an .sql extension and Data is saved with a .brw extension.
    e. On the 'Select Data Tables' box make sure Tables, Views, and Queries have X's.
    f. If 'HQEIS' is not in the rectangular box under the 'Show' box; click on the down arrow and select the 'gladiator_ora1' database. If 'gladiator_ora1' is not on the pick list, pick the database that shows the 'ora1' extension. Then select 'HQEIS' and press OPEN or double click on 'HQEIS'. The 'Select Data Tables' box will then display a list of all tables within the HQEIS production database
    g. To select tables to use for a query single click on the table name and press 'Include' or double click on the table name. Do this for each table that you wish to select. Click 'Close' to exit the 'Select Data Tables' box after all tables have been selected. For example, highlight the table named 'FACILITY_NORM' by clicking on it once, select 'Include', and then press 'Close'.

2. To Identify Tables Related to the One you Selected:

    a. Highlight the table for which you want to see the related tables for by clicking on the table name at the top of the table (it will darken when selected). Go to 'Data' on the menu bar and choose 'Select Related Tables'.
    b. To select related tables to add to your query, highlight them and press 'Include' or double click on the table name. When you have selected all the tables you want (example: INSTALLATION and RPF_CATEGORY) click on 'Close'.
    c. Query Builder has defined the relationships. The table relationships (joins) will occur automatically.

3. Expand the Query Window so it is Easier to See:

    a. Click on the Maximize arrow in the upper right corner of the 'Query' window. It may need to be maximized twice to expand to full screen.
    b. The 'Query' window has two sections. The left side to apply condition statements to the query and the right side to identify the tables, relationships and columns to display. The 'Query' window orientation can be changed from left/right to top/bottom by selecting 'Edit' from the menu bar, then selecting 'Preferences'. Within 'Preferences' select 'Vertical' from the 'Panel Split Direction' box. This will allow the user to see the condition statements better. Click on 'OK.'

4. Helpful Hints:

a. There is a lot of detailed HELP in the Query Builder itself; this is just a quick overview to get you going with HQEIS tables.
b. A draft Data Dictionary is on the HQEIS Main Menu and provides table and column definitions as well as acceptable values and descriptions.
c. FACILITY_NORM is the normalized FACILITY table and should be used for counting.
d. If FY and QTR are on one of the selected tables, you must indicate which FY and QTR you want to display in the Condition Box.
e. Pre-summarized information is available using the RPI, HSG, GENSTATS, INL, INV, RPC, CST, and MCK tables.
f. Any typing instructions must be followed exactly. The system is case sensitive.

5. Setting Conditions:

a. Alphanumeric fields (columns) are identified with an 'A' after the column name on the table. Date fields (columns) are identified with a 'D' on the table. Both type of fields need to be enclosed with single quotes ('71111') when setting a condition statement
b. Number fields (columns) are identified with a '789' after the column name on the table. These fields don't need single quotes in the condition statement.
c. The data between the single quotes is case sensitive.
d. '%' is a wildcard which can be used with the 'like' command. Example: like '711%' to select all Category Codes that start with 711.
e. Use an 'in' statement for multiple conditions. Example: in ('XXXXX', 'YYYYY')
f. Use a 'between' statement to find data between two values. Example: between '00000' and '99999'.

6. To Set Conditions:

a. Go to the light gray box to the left in the upper portion of the screen and click once inside the box to activate it. This is the Condition Box.
b. Click once on the column name that you want to set a condition against (example: Click once on *FY* on the *INSTALLATION* table and type **= 2000**). This is now a condition statement.
c. Press 'ENTER' to set another condition in the Condition Box. Repeat the same procedures to enter another condition statement (example: Click once on *QTR on the INSTALLATION* table and type **= 4**.
d. Examples of other condition statements are:

- Click on *OWNERSHIP_CODE* on the *FACILITY_NORM* table and type **in ('1', '2', '3', '4', '5', '6', '7', '8', 'C')**. This will include the 1, 2, 3, 4, 5, 6, 7, 8 ownership codes.
- Click on *TYPE_CONSTRUCTION_ CODE* on the *FACILITY_NORM* table and type **in ('P', 'S')** thus eliminating temporary facilities
- Click on *DESIGN_USE_CATEGORY_CODE* on the *FACILITY_NORM* table and type **like '711%'** to select only Family Housing related facilities.
- Click on *MAJOR_COMMAND_CODE* on the *INSTALLATION* table and type **= 'P'**

e. When the last condition has been entered, click on ENTER to activate the query option on the menu bar or click outside the Condition Box.

7. To Select Columns in the Table(s) to Display in your Report:

a. Double click on each field (column) in the table that you want to display as part of the query output (these fields (columns) will have a black checkmark next to them) or go to 'RESULTS/DISPLAY' and select them there. The fields that have a gray checkmark have been selected as part of the condition statements. Click the fields in the order that you want them to display in the output or reorder them in the 'RESULTS/DISPLAY' screen by clicking and dragging them to the correct position. To drag, just hold down the left mouse button and move the field name where you want it.
b. You can pick fields from the table, which are not part of the conditions and vice versa.

8. To Execute a Query:

a. The user must be outside of the Condition Box to execute the query. Just click once anywhere outside the Condition Box and the menu bar options will be activated.
b. Go to 'QUERY/EXECUTE QUERY' on the menu bar or the Execute Query icon (the one with the little question mark) to execute the query.
c. After the query has executed, the results can be formatted.

9. To Format the Results:

a. To revise the Column Headings on the Query output either go to 'RESULTS/FORMAT' on the menu bar or you can double click on the column headings on the Query output. Highlight the column heading in the 'Print Title' box by double clicking on the name and typing in a shorter or revised version of the Column Name. Repeat for each Column Name that you would like to change by clicking once on the name in the 'For Column' box and revising it in the 'Print Title' box. When you are finished, click 'OK'.
b. You can move back and forth from the query to the results view by clicking on Window on the menu bar and selecting either the 'QUERY' or the 'RESULTS' view.
c. You can resize the column width by putting the cursor on the line between column headings and dragging to make the column wider or narrower or by highlighting the column and using the 'LAYOUT/AUTORESIZE COLUMN' to automatically change to the correct width.
d. Numerical data fields can be reformatted to display with commas, dollar signs or whole numbers by clicking on the 'RESULTS/DISPLAY' on the menu bar or by double clicking on the column name on the results display. Use the 'Format Mask' box and select the format that you prefer. The user may need to add additional 9's to the formatting number to make the number long enough for the display.

10. To Add Another Table to the Query:

a. Go to 'DATA/SELECT DATA TABLES' and choose another table to be included (as in 1.e. above) or highlight a table on the Query view and use the 'DATA/SELECT RELATED TABLES' on the menu bar to ensure the relationship is already established (as in 2.a.-c. above).

11. To Delete a Table from the Query:

a. Click on the table name at the top of the table and press the 'DELETE' key.

12. To Define New Columns on a Table (Sum, Count):

To Sum:

a. Go to 'WINDOW/QUERY' view
b. Click at the top of the table to which you would like to add a new field (column). It will turn black to indicate it has been selected. (Example: Select the *FACILITY_NORM* table)
c. Then select 'Results/Define Column' from the menu bar.
d. Type a name for the new field you want to create in the 'Defined Columns' box. (Example: Type AREA as the new field name)
e. Type the summary statement in the 'Defined as' box by typing the words 'sum ( )' and insert the column that you want to sum within the parentheses by clicking on it. (Example: type **sum(**then click on *GROSS_AREA ASSIGNED* on the *FACILITY_NORM* table and close the parentheses.)
f. Click on 'Define' to create the new field on the table. Double click on the new field created on the table to select it for display in the output.

WARNING: Do not sum the area (GROSS_AREA_ASSIGNED) or capacity (ASSIGNED_OTHER_MEAS_TOTAL) for category codes with dissimilar *CATEGORY_CODE_UM1s.* Make sure you are summing like things.

To Count:

a. Repeat the same procedures in 'To Sum' 12. a.-d. above.
b. Type a name for the field you want to count in the 'Defined Columns' box. (Example: COUNT as the name.
c. Type the count statement in the 'Defined As' box by typing the words **count(distinct** then click on the column that you want to count within the parentheses. (Example: type **count(distinct** then leave a space and click on *INSTALLATION_NUMBER* and close the parenthesis)
d. Click on 'Define' to create the new column. Double click on the new field on the table to select it for display in the output.
e. To count facility numbers you must join the *INSTALLATION_NUMBER* with the *FACILITY_NUMBER* because they are unique to an installation. (Example: type **count(distinct** and click on *INSTALLATION_NUMBER*, type **||** (use the pipe stem key next to the Shift key on the keyboard)**,** then click on *FACILITY_NUMBER* and close the parenthesis)

13. Define Columns with Decodes:

a. Repeat the same procedures in 'To Sum' 12. a.-d. above
b. Type a name for the field you want to count in the 'Defined Columns' box. (Example: PERM AREA)
c. Type the column statement in the 'Defined As' box by typing the words **sum(decode (** then click on *TYPE_CONSTRUCTION CODE* type **, 'P',** then click on *GROSS_AREA_ASSIGNED and type* , **0))**
d. Click on 'DEFINE' to create the new column. Double click on the summary field to select it for display in the output.
e. This can also be done for Semi-permanent or Temporary type construction using an **'S'** or **'T'**.

14. To Add Breaks to the Query Output:

a. Go to 'RESULTS/BREAK' and click on on field that you would like to break on. A break will reduce multiple instances of a name to one with the related data. Click 'OK'.
b. A message may appear that says, "Data not available for local break. Re-execute?" Click 'YES'.

15. To Add Totals to Query Output:

a. Go to 'RESULTS/TOTALS'
b. Click on the columns within the 'Select Columns Box' that you want to total. Make sure you selected data that can be added.
c. Select the Summary Operation you want to be performed. Then click 'OK'.
d. If Breaks are already defined in the output, subtotals will be identified for each break group.

16. To Sort the Query Output:

a. Go to 'WINDOW/RESULTS'. Highlight the column and then click on 'A-Z' or 'Z-A' or go to 'RESULTS/SORT' and select the columns you want to sort on. Click on 'OK.'

17. To Save the Query with Formatting:

a. Go to 'FILE/SAVE' As and select 'File System/OK'
b. Arrow down to select your C:\\Client\\C$ or D:\\\Client\D$ drive and select the Directory where you want the file to be retained. **WARNING:** Do not save to the Winframe Server drives: T:, U:, or V: because your files may be deleted by the Winframe Administrator
c. Save as a browser file (.brw) to retain the report formatting.

18. To Save the Data Only:

a. Go to 'FILE/EXPORT' Data
b. Save as tab-delimited (TXT) or save as one of the other file formats on the Available Formats list. A .TXT file will import nicely into any spreadsheet software (Excel, Quattro Pro).
c. Put an 'X' in 'Include Column Headings' box
d. Put in path of where you want to save the file to (Example: C:\Querys\Data.txt). Remember not to save to the Winframe Server drives (T:, U:, V:).

19. To Retrieve a File from Local Hard Drive to Re-Execute:

a. When entering the Query Builder for the first time select 'OPEN QUERY FROM FILE SYSTEM'. If already in Query Builder select 'FILE/OPEN' from the menu bar or click on the 'Open Folder' icon. Select 'Open From: File System' and click 'OK'.
b. Arrow to the drive and subdirectory where your file was saved. Select the file you want to open (.brw, .sql) and click 'OK'.
c. The user must re-execute the query by selecting 'QUERY/EXECUTE QUERY' from the menu bar or click on the Execute Query icon.

20. To Print Results:

a. Select 'FILE/PRINT SETUP' from the menu bar to pick the printer and Orientation.
b. Select 'FILE/PRINT' and 'OK' to print.